

United States of America

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item 7.2 to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution **802 (WRC-03)**,

Background Information: In the Preliminary Agenda for WRC-2010, agenda item 2.2 states: “to consider frequency allocations between 275 GHz and 3 000 GHz taking into account the result of ITU-R studies in accordance with Resolution **950 (WRC-03)**;”

Studies in the ITU-R, most notably WP1A, WP3J, WP3M, WP4A, WP7B, WP7C, WP7D, WP8A, WP9B, have very clearly identified the interest within the active and passive services in using frequencies in the spectral region above 275 GHz. Resolution **950 (WRC-03)** has allowed for the submission of details on systems operating in this range into the Master International Frequency Register (MIFR). However, there is no registered use to date by any of the active services. On the other hand, the radio astronomy, Earth exploration-satellite (passive) and the space research (passive) services all make extensive use of this spectral region. Within the radio astronomy service, several administrations have already made significant infrastructure investments in radio astronomy sites around the world. This extensive use of this spectral region by the passive services along with the lack of use of the same by the various active services indicates that the general consideration of frequency allocations between 275 and 3000 GHz is premature and such consideration would likely take up a great deal of resources in preparing for the 2010 Conference. As an alternative, reviewing and revising No. **5.565** would be desirable while at the same time require far less preparation by administrations for the 2010 Conference.

Proposal:

USA/ /1 MOD

RESOLUTION 803 (WRC-0307)

~~Preliminary~~ Agenda for the 2010 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2003~~7~~),

USA/ /2 SUP

~~2.2~~ to consider frequency allocations between 275 GHz and 3 000 GHz taking into account the result of ITU-R studies in accordance with Resolution **950 (WRC-03)**;

USA/ /3 ADD

2.X to review and revise No. **5.565** with a view to updating the list of frequencies for passive services in the spectral region from 275 – 3000 GHz, taking into account the results of ITU-R studies in accordance with Resolution 950.

Reasons: The extensive use of this spectral region by the passive services along with the lack of use of the same by the various active services indicates that the general consideration of frequency allocations between 275 and 3000 GHz is premature and such consideration would likely take up a great deal of resources in preparing for the 2010 Conference. As an alternative, reviewing and revising No. **5.565** would be desirable while at the same time require far less preparation by administrations for the 2010 Conference.

USA/ 14 MOD

RESOLUTION 950 (WRC-0307)

**Consideration of the use of the frequencies
between 275 and 3000 GHz**

The World Radiocommunication Conference (Geneva, 2003),

considering

- a) that, in the Table of Frequency Allocations, frequency bands above 275 GHz are not allocated;
- b) that, notwithstanding *considering a)*, No. **5.565** makes provision for the use of the frequency band 275-1 000 GHz for ~~the experimentation with, and~~ development of various passive services and all other services and recognizes the need to conduct further ~~experimentation and~~ research;
- c) that No. **5.565** also makes provision for the protection of passive services until, and if, such time as the Table of Frequency Allocations may be extended;
- d) that, in addition to the spectral lines identified by No. **5.565**, research activities in the bands above 275 GHz may yield other spectral lines of interest, such as those listed in Recommendation ITU-R RA.314;
- e) that within various Radiocommunication Study Groups, studies on systems between 275 and 3000 GHz, including system characteristics of suitable applications, are being considered;
- f) that the present use of the bands between 275 and 3000 GHz is mainly related to the passive services, however, with anticipated technology development, the bands may become increasingly important for suitable active service applications;
- g) that sharing studies in ITU-R among passive services and all other services operating in frequencies between 275 and 3000 GHz have not been completed,

recognizing

- a) that propagation characteristics at frequencies above 275 GHz, such as atmospheric absorption and scattering, have a significant impact on the performance of both active and passive systems and need to be studied;

b) that it is necessary to investigate further the potential uses of the bands between 275 and 3 000 GHz by suitable applications,

noting

a) that significant infrastructure investments are being made under international collaboration for the use of these bands between 275 and 3 000 GHz, for example, the Atacama Large Millimetre Array (ALMA), a facility under construction that will provide new insights on the structure of the universe;

b) that Radiocommunication Bureau Circular Letter CR/137 identified additional information for the Bureau to record characteristics of active and passive sensors for Earth exploration-satellite service and space research service satellites, in frequency bands below 275 GHz,

further noting

a) that a process and format similar to that provided in *noting b)* could be used to record systems operating in the 275 to 3 000 GHz band;

b) that recording active and passive systems operating in the 275 to 3 000 GHz band will provide information until the date when, and if, it is determined that changes to the Radio Regulations are needed,

resolves

~~1~~ to consider at WRC-10 frequency allocations between 275 GHz and 3 000 GHz taking into account the result of the ITU-R studies;

~~2~~ that administrations may submit for inclusion in the Master International Frequency Register details on systems which operate between 275 and 3 000 GHz and which may be recorded by the Radiocommunication Bureau under Nos. **8.4**, **11.8** and **11.12**,

invites ITU-R

to conduct the necessary studies in time for consideration by WRC-10 with a view to the modification of No. ~~5.565~~ or the possible extension of the Table of Frequency Allocations above 275 GHz, including advice on the applications suitable for such bands,

instructs the Director of the Radiocommunication Bureau

to accept submissions referred to in *resolves-2*, and to record them in the Master International Frequency Register.
